



Product information according to SDS format of (EC) No. 453/2010

Printing date: 02.03.2011 Version: 2 Revision date: 02.03.2011/ replaces Version of 10.12.2010

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Material name / Trade name: **Potassium sulphate**

EC-No.: 231-915-5

CAS-No.: 7778-80-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant uses: see complete list in section 16

1.3 Details of the supplier of the safety data sheet

Manufacturer /Supplier

LCP Leuna Carboxylation Plant GmbH, Am Haupttor, Bau 7629, 06237 Leuna

Contact point for technical information

Telefon / Telefax / E-Mail

+49 (3461) 43 43 50 / + 49 (3461) 43 43 52 / E-Mail: info@lcp-carboxy.com

1.4 Emergency telephone number

+49 (3461) 43 43 33 (Plant Fire Dept. at chemical site Leuna)

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008, Annex VII (substances): not hazardous

Classification according to Directive 67/548/EEC or Directive 1999/45/EC (substances or mixtures): not hazardous

The product should only be handled by specially trained personnel.

2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008 (substances) / Directive 1999/45/EC (mixtures)

Hazard pictograms: -

Signal word / Hazard description: -

Hazard-determining components of labelling

contains: -

Hazard advices / R-Phrases

-

Safety advices / S-Phrases

-

Other label elements



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2.3 Other hazards -

3. Composition/information on ingredients

3.1 Substances

Main component of the substance

Material name: Potassium sulphate

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CAS-No.: 7778-80-5

4. First aid measures

4.1 Description of first aid measures

After inhalation

- Remove the victim into fresh air
- Respiratory problems: consult a doctor/medical service

After skin contact

- Wash with water and soap
- Take victim to a doctor if irritation persists

After eye contact

- Rinse immediately with plenty of water for 15 minutes
- Do not apply neutralizing agents
- Take victim to an ophthalmologist

After ingestion

- Rinse mouth with water
- Immediately after ingestion give lots of water to drink
- Victim is fully conscious: immediately induce vomiting
- Consult a doctor/medical service if you feel unwell

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

5. Fire fighting measures

Not flammable

5.1 Extinguishing media

applicable:

For surrounding fires:

- Adapt extinguishing media to the environment

not applicable: - No unsuitable extinguishing media known

5.2 Special hazards arising from the substance or mixture



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Special exposure hazards:

- No fire hazard
- On burning: release of toxic and corrosive gases/vapours (sulphur oxides)

5.3 Advice for fire fighters

Special protective equipment for firefighters:

- Gloves
- Safety glasses
- Protective clothing
- Dust cloud production: compressed air/oxygen apparatus
- Heat/fire exposure: compressed air/oxygen apparatus

5.4 Further instructions

- Dilute toxic gases with water spray

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

See Exposure controls

6.2 Environmental precautions

- Contain released substance
- Prevent entry to sewers and public waters
- Plug the leak, cut off the supply
- Knock down dust cloud with water spray

6.3 Methods and material for containment and cleaning up

- Shovel the dry product into suitable containers
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

6.4 Reference to other sections

7. Handling and storage

7.1 Precautions for safe handling



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Information for safe handling

- Observe normal hygiene standards
- Avoid contact with skin and eyes
- Avoid raising dust and arrange a good dedusting
- Arrange a good ventilation / exhaustion at workplace.
- Keep receptacles well sealed. Avoid any kind of fire.

Information about fire- and explosion protection

- No special measure required.

7.2 Conditions for safe storage, including any incompatibilities

- Store cool
- Store in a dry area
- Unsuitable receptacles: Aluminium
- Keep receptacles well sealed.
- Keep receptacles in a good aired place.

storage class: -

7.3 Specific end use(s)

Branch and sector- specific guidelines -

8. Exposure controls/personal protection

8.1 Control parameters

8.1.1 Limit values for the exposure at the workplace and/or biological limit values Workplace limit values (AGW) Germany

Not required

8.1.2 DNEL- and PNEC- Values -

8.1.3 Control-Banding (e.g. ILO, EMKG) -

8.2 Exposure controls

Occupational exposure controls:

- Carry operations in the open air/under local exhaust/ventilation or with respiratory protection

8.2.1 Appropriate engineering controls

8.2.2 Individual protection measures, such as personal protective equipment

Eye/face protection

- Safety glasses
- In case of dust production: protective goggles

Skin/ body protection

- Protective clothing and shoes



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Hand protection
- Gloves
Suitable materials: Rubber

Respiratory protection
- Dust production: dust mask with filter type P1

- 8.2.3 Environmental exposure controls**
- Dispose of rinse water in accordance with local and national regulations.
-

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
- Form: solid
- Colour : white
Odour: almost odourless
pH: 5.5-8 (50 g/l at 20 °C)
Melting point/freezing point: 1067 °C at 1013 hPa
Initial boiling point and boiling range: 1689 °C
Flash point: not applicable
Flammability (solid, gas): non flammable
Relative density: 2.66 g/cm³ at 20 °C
Solubility in water: 120 g/l at 25 °C
Explosive properties: non explosive, Product is reacting with aluminium powder, zircon powder, natriumacetylid

Oxidising properties. non oxidising

9.2 Other information

10. Stability and reactivity

10.1 Reactivity

- Stable under normal conditions of use

10.2 Chemical stability

- Stable under normal conditions of use

Possibility of hazardous reactions

- 10.3** Decomposition at high temperatures with dimerisation of toxic gas and vapors (sulphur oxides).
The fused product is reacting acute with some metals.
Strong exothermal reactions with aluminium powder, zircon powder, natriumacetylid

10.4 Conditions to avoid

- Keep away from heat sources

10.5 Incompatible materials

See 10.3, - Unsuitable receptacles: Aluminium

10.6 Hazardous decomposition products

- On burning: release of toxic and corrosive gases/vapours (sulphur oxides)



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11. Toxicological information

11.1 Information on toxicological effects

acute toxicity:

- oral LD50: > 2000 mg/kg bw (rat, male/female) (read across from potassium magnesium sulphate and ammonium phosphate sulphate)

- oral LD50: 6600 mg/kg bw (reliability: Klimish 4)

- dermal LD50: > 2000 mg/kg bw (rat, male/female)

- inhalative LC50: >1200 mg/m³ (for sulphate category based on ammonium sulphate)

skin corrosion/irritation: not irritating to skin according to in vitro study (EU method B.46)

serious eye damage/irritation: not irritating/ not corrosive to eyes according to OECD 405 (rabbit)

skin sensitisation: not sensitising (mouse (CBA) female Local lymph node assay OECD 429)

genotoxicity:

- negative (OECD Guideline 471 (Bacterial Reverse Mutation Assay), OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test))

Carcinogenicity: no indications on carcinogenic potential according to available data

reproduction/developmental toxicity and reproduction (fertility):

- NOAEL/ LOAEL: > 1500 mg/kg bw/day (nominal) (No adverse effects were seen on general toxicity endpoints, on reproduction/developmental toxicity endpoints, fertility endpoints), OECD Guideline 422 (rat))

Symptoms and effects (delayed and chronic) with data of the exposure routes also: Information about toxicokinetics, metabolism and distribution

not expected to bioaccumulate

Toxicokinetics: 50% oral, dermal and inhalation absorption

12. Ecological information

12.1 Toxicity

LC 50 (96 h), *Pimephales promelas*: 680 mg/L

LC 50 (96 h), *Lepomis macrochirus*: 3550 mg/L

LC 50 (48 h), *Daphnia magna*: 720 mg/L

NOEC, Algae \geq 100 mg/L (extrapolated from read across substance as no data is available for K₂SO₄)

Toxicity to aquatic microorganisms: NOEC expected to be above 100 mg/L (In view of the use of the substances (fertilizer) and the available data on other trophic levels with the inorganic sulphates, we do not expect any of the sulfate substances to be toxic to activated sludge. In addition, sulfates are known to be important for some microorganisms - some anaerobic microorganisms use sulfates as electron acceptors. Conclusion: EC50/ NOEC is above 100 mg/l for all inorganic sulphates)

12.2 Persistence and degradability

Not applicable for inorganic substances

12.3 Bioaccumulative potential

no bioaccumulation potential

12.4 Mobility in soil

no adsorption to soils expected, distribution in compartment water (good water solubility)

12.5 Results of PBT and vPvB assessment

not PBT and not vPvB



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12.6 Other adverse effects

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13. Disposal considerations

Provisions relating to waste:

- Waste material code (75/442/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001)
- Depending on branch of industry and production process, also other EURL codes may be applicable
- 06 03 14: solid salts and slutions other than those mentioned in 06 03 11 and 06 03 13
- Hazardous waste (91/689/EEC)

Disposal methods:

- Recycle/reuse
- Precipitate/make insoluble
- Remove to an authorized dump (Class I)
- Remove waste in accordance with local and/or national regulations

Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC,O.J. L47 of 16/2/2001):
- 15 01 10* (packaging containing residues of or contaminated by dangerous substances)

14. Transport information

14.1 UN number

-

14.2 UN proper shipping name

ADR/RID

-

IMDG-Code / ICAO-TI / IATA-DGR

-

14.3 Transport hazard class(es)

-

14.4 Packing group

-

14.5 Environmental hazards

Characteristic environmentally hazardous materials

ADR/RID / IMDG-Code / ICAO-TI / IATA-DGR: no

Marine pollutant: no

14.6 Special precautions for user

-

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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15. Regulatory information



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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations e.g.

Regulation (EC) No. 2037/2000 (on substances that deplete the ozone layer):

-

Regulation (EC) No. 850/2004 (Persistent organic pollutants):

-

Regulation (EC) No. 689/2008 (concerning the export and import of dangerous chemicals):

-

Regulation (EC) No. 648/2004 (Detergents):

-

Restrictions in accordance with title VIII of the regulation (EC) 1907/2006 (REACH):

-

National regulations (Germany) e. g.

Wassergefährdungsklasse

-

Lösemittelverordnung (31. BImSchV)

-

Störfallverordnung (12. BImSchV)

-

Technische Anleitung Luft(TA-Luft)

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Weitere relevante Vorschriften

15.2 Chemical safety assessment (CSA)

CSA was performed within the REACH registration. An extension of the SDS with exposure scenarios is not necessary because the substance is not classified as hazardous.



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16. Other information

Complete list of relevant identified uses of the substance in accordance with the registration dossier:

Table 1. Uses by workers in industrial settings

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
1	Manufacturing of the substance in a continuous process where opportunity for exposure arises including storage, handling and q control.	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 1: Use in closed process, no likelihood of exposure PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC 15: Use as laboratory reagent</p> <p>Environmental release category (ERC):</p> <p>ERC 1: Manufacture of substances</p> <p>Sector of end use (SU):</p> <p>SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>Subsequent service life relevant for that use?: no</p>
2	Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Industrial setting.	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
3	Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Industrial setting.	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
4	Storage	as such (substance itself)	<p>Process category (PROC):</p> <p>PROC 1: Use in closed process, no likelihood of exposure</p>



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			<p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
5	Transfer of substance into small containers (dedicated filling line, including weighing). Industrial setting.	as such (substance itself)	<p>Process category (PROC): PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
6	Q control	as such (substance itself)	<p>Process category (PROC): PROC 15: Use as laboratory reagent</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
7	Use of potassium sulphate in a batch process for formulation of preparations for fertilizers, plant protection products and extinguishing powder.	as such (substance itself)	<p>Process category (PROC): PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>Market sector by type of chemical product: PC 12: Fertilisers PC 27: Plant protection products PC 0: Other: UCN B50000</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p> <p>Subsequent service life relevant for that use?: no</p>
8	Use of potassium sulphate in the formulation of preparations for fertilizers, plant protection products, extinguishing powder, dyes and chemicals for textiles, leather and paper using technologies related to mixing and blending, and where the process is i	as such (substance itself)	<p>Process category (PROC): PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p> <p>Market sector by type of chemical product: PC 12: Fertilisers PC 27: Plant protection products PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 23: Leather tanning, dye, finishing, impregnation and care products PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids PC 0: Other: UCN B50000</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p> <p>Subsequent service life relevant for that use?: yes</p>



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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
9	Use of potassium sulphate in a closed batch process in formulation of preparations for extinguishing powder and paper and board dye. Some opportunity for contact with samples occur through sampling	as such (substance itself)	<p>Process category (PROC): PROC 3: Use in closed batch process (synthesis or formulation)</p> <p>Market sector by type of chemical product: PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 0: Other: UCN B50000</p> <p>Environmental release category (ERC): ERC 2: Formulation of preparations</p> <p>Subsequent service life relevant for that use?: no</p>
10	Use of potassium sulphate in the formulation of materials for construction materials, ceramics, abrasives, dyes and chemicals for textiles, leather and paper using technologies related to mixing and blending, and where the process is in stages and provide	as such (substance itself)	<p>Process category (PROC): PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 23: Leather tanning, dye, finishing, impregnation and care products PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids PC 0: Other: UCN K35000</p> <p>Environmental release category (ERC): ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
11	Use of potassium sulphate in the production of abrasive appliances by tableting, compression, extrusion and pelletisation	as such (substance itself)	<p>Process category (PROC): PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation</p> <p>Market sector by type of chemical product: PC 0: Other: UCN S35000</p> <p>Environmental release category (ERC): ERC 3: Formulation in materials</p> <p>Subsequent service life relevant for that use?: no</p>
12	Low energy manipulation of potassium sulphate bound in abrasive appliances, industrial setting	as such (substance itself)	<p>Process category (PROC): PROC 21: Low energy manipulation of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 0: Other: UCN S35000</p> <p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: no</p>



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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
13	Handling of potassium sulphate at ambient temperature for production of abrasive appliances, industrial setting	as such (substance itself)	<p>Process category (PROC): PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 0: Other: UCN S35000</p> <p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: no</p>
14	Industrial use of potassium sulphate in calendaring operations for use in dyes and chemicals for textiles, leather and paper	as such (substance itself)	<p>Process category (PROC): PROC 6: Calendaring operations</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 23: Leather tanning, dye, finishing, impregnation and care products PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids</p> <p>Environmental release category (ERC): ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: no</p>
15	Industrial use of potassium sulphate in industrial spraying of dyes and chemicals for textiles, leather and paper	as such (substance itself)	<p>Process category (PROC): PROC 7: Industrial spraying</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 23: Leather tanning, dye, finishing, impregnation and care products PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids</p> <p>Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: no</p>
16	Industrial use of potassium sulphate in roller applications or brushing for use in dyes and chemicals for textiles, leather and paper	as such (substance itself)	<p>Process category (PROC): PROC 10: Roller application or brushing</p> <p>Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 23: Leather tanning, dye, finishing, impregnation and care products PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids</p> <p>Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part</p>



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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
			of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix Subsequent service life relevant for that use?: no
17	Industrial use of potassium sulphate in treatment of articles by dipping and pouring for dyes and chemicals for textiles, leather and paper	as such (substance itself)	Process category (PROC): PROC 13: Treatment of articles by dipping and pouring Market sector by type of chemical product: PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents PC 23: Leather tanning, dye, finishing, impregnation and care products PC 26: Paper and board dye, finishing and impregnation products: including bleaches and other processing aids PC 34: Textile dyes, finishing and impregnating products; including bleaches and other processing aids Environmental release category (ERC): ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix Subsequent service life relevant for that use?: no
18	Industrial use of potassium sulphate as intermediate in batch and other processes where opportunity for exposure arises	as such (substance itself)	Process category (PROC): PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises Market sector by type of chemical product: PC 19: Intermediate Environmental release category (ERC): ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) Subsequent service life relevant for that use?: no
19	High energy work-up of potassium sulphate bound in cutting and grinding applications, industrial setting	as such (substance itself)	Process category (PROC): PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles Market sector by type of chemical product: PC 0: Other: UCN S35000 Environmental release category (ERC): ERC 12b: Industrial processing of articles with abrasive techniques (high release) Subsequent service life relevant for that use?: no
20	identified uses that have been communicated by downstream users		Process category (PROC): PROC 1: Use in closed process, no likelihood of exposure PROC 2: Use in closed, continuous process with occasional controlled exposure PROC 3: Use in closed batch process (synthesis or formulation) PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) PROC 7: Industrial spraying PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC 8b: Transfer of substance or preparation (charging/discharging) from/to



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			<p>vessels/large containers at dedicated facilities PROC 10: Roller application or brushing PROC 11: Non industrial spraying PROC 14: Production of preparations or articles by tableting, compression, extrusion, pelletisation PROC 19: Hand-mixing with intimate contact and only PPE available. PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>Market sector by type of chemical product:</p> <p>PC 1: Adhesives, sealants PC 9a: Coatings and paints, thinners, paint removes PC 9b: Fillers, putties, plasters, modelling clay PC 9c: Finger paints PC 15: Non-metal-surface treatment products PC 19: Intermediate PC 4: Anti-freeze and de-icing products PC 0: Other: 10; PC 0: setting agent; PC 5</p> <p>Environmental release category (ERC):</p> <p>ERC 2: Formulation of preparations ERC 3: Formulation in materials ERC 4: Industrial use of processing aids in processes and products, not becoming part of articles ERC 5: Industrial use resulting in inclusion into or onto a matrix ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release ERC 6a: Industrial use resulting in manufacture of another substance (use of intermediates) ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing) ERC 11b: Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing) ERC 1: Manufacture of substances</p> <p>Sector of end use (SU):</p> <p>SU 1: Agriculture, forestry and fishing SU 2a: Mining (without offshore industries) SU 2b: Offshore industries SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement SU 19: Building and construction work SU 0: Other: Complete SU3; others; Complete SU 21, Complete SU 22; All the reported uses in this identified use number 20 are for SU 21 (Consumer USES) and SU 22 (Professional uses) as well! SU 4: Manufacture of food products SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)</p> <p>Subsequent service life relevant for that use?: no</p>

Table 2. Uses by professional workers



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IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
20_1	Professional use of fertilizers containing potassium sulphate – outdoor non-industrial spraying	in a mixture	<p>Process category (PROC): PROC 11: Non industrial spraying</p> <p>Market sector by type of chemical product: PC 12: Fertilisers</p> <p>Environmental release category (ERC): ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
21	Handling at ambient temperature of potassium sulphate for use in fertilizers, plant protection products and fire extinguishing powder – professional use	as such (substance itself)	<p>Process category (PROC): PROC 26: Handling of solid inorganic substances at ambient temperature</p> <p>Market sector by type of chemical product: PC 12: Fertilisers PC 27: Plant protection products PC 0: Other: UCN B50000</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
22	Professional use of construction materials containing potassium sulphate – hand-mixing with intimate contact	in a mixture	<p>Process category (PROC): PROC 19: Hand-mixing with intimate contact and only PPE available.</p> <p>Market sector by type of chemical product: PC 0: Other: UCN K35000</p> <p>Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix</p> <p>Subsequent service life relevant for that use?: no</p>
23	High energy work-up of potassium sulphate bound in cutting and grinding applications, professional setting	in a mixture	<p>Process category (PROC): PROC 24: High (mechanical) energy work-up of substances bound in materials and/or articles</p> <p>Market sector by type of chemical product: PC 0: Other: UCN S35000</p> <p>Environmental release category (ERC): ERC 10b: Wide dispersive outdoor use of long-life articles and materials with high or intended release (including abrasive processing) ERC 11b: Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)</p> <p>Subsequent service life relevant for that use?: no</p>
24	Professional use of potassium sulphate in roller applications or brushing for use	in a mixture	<p>Process category (PROC): PROC 10: Roller application or brushing</p> <p>Market sector by type of chemical product:</p>



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Printing date:

02.03.2011 Version: 2

Revision date: 02.03.2011/ replaces Version of 10.12.2010

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
	in cleaning agents		<p>PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
25	Professional use of potassium sulphate for non-industrial spraying of cleaning agents	in a mixture	<p>Process category (PROC): PROC 11: Non industrial spraying</p> <p>Market sector by type of chemical product: PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
26	Professional use of potassium sulphate in treatment of articles used as cleaning agents by dipping and pouring	in a mixture	<p>Process category (PROC): PROC 13: Treatment of articles by dipping and pouring</p> <p>Market sector by type of chemical product: PC 35: Washing and cleaning products (including solvent based products)</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
27	Professional use of potassium sulphate in laboratory chemicals	as such (substance itself)	<p>Process category (PROC): PROC 15: Use as laboratory reagent</p> <p>Market sector by type of chemical product: PC 21: Laboratory chemicals</p> <p>Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
28	Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at non-dedicated facilities. Professional setting	as such (substance itself)	<p>Process category (PROC): PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities</p> <p>Market sector by type of chemical product: PC 12: Fertilisers PC 27: Plant protection products PC 0: Other:</p> <p>Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems</p> <p>Subsequent service life relevant for that use?: no</p>
29	Sampling, loading, filling,	as such (substance	<p>Process category (PROC): PROC 8b: Transfer of substance or preparation (charging/discharging) from/to</p>



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Printing date:

02.03.2011 Version: 2

Revision date: 02.03.2011/ replaces Version of 10.12.2010

IU number	Identified Use (IU) name	Substance supplied to that use	Use descriptors
	transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities. Professional setting.	itself)	vessels/large containers at dedicated facilities Market sector by type of chemical product: PC 12: Fertilisers PC 27: Plant protection products PC 0: Other: Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems Subsequent service life relevant for that use?: no
30	Transfer of substance into small containers (dedicated filling line, including weighing). Professional setting.	as such (substance itself)	Process category (PROC): PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) Market sector by type of chemical product: PC 12: Fertilisers PC 27: Plant protection products PC 0: Other: Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems Subsequent service life relevant for that use?: no
31	Further uses of downstream users (identified uses of DUs)		Process category (PROC): PROC 0: Other: all the PROCs reported in IU 20 of industrial uses in SU3 above Market sector by type of chemical product: PC 0: Other: all the PCs reported in IU 20 of industrial uses in SU3 above Environmental release category (ERC): ERC 0: Other: others, all the ERC reported in IU 20 of industrial uses in SU3 above Sector of end use (SU): Subsequent service life relevant for that use?: no

Table 3. Uses by consumers

IU number	Identified Use (IU) name	Use descriptors
31_1	Consumer use of potassium sulphate in fertilizers – surface spreading	Chemical product category (PC): PC 12: Fertilisers Environmental release category (ERC): ERC 8a: Wide dispersive indoor use of processing aids in open systems ERC 8d: Wide dispersive outdoor use of processing aids in open systems ERC 8b: Wide dispersive indoor use of reactive substances in open systems ERC 8e: Wide dispersive outdoor use of reactive substances in open systems



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Printing date:

02.03.2011 Version: 2

Revision date: 02.03.2011/ replaces Version of 10.12.2010

IU number	Identified Use (IU) name	Use descriptors
		Subsequent service life relevant for that use?: no
32	Consumer use of potassium sulphate in plant protection products	Chemical product category (PC): PC 27: Plant protection products Environmental release category (ERC): ERC 8e: Wide dispersive outdoor use of reactive substances in open systems Subsequent service life relevant for that use?: no
33	Consumer use of potassium sulphate in construction materials	Chemical product category (PC): PC 0: Other: UCN K35000 Environmental release category (ERC): ERC 8c: Wide dispersive indoor use resulting in inclusion into or onto a matrix Subsequent service life relevant for that use?: no
34	Consumer use of potassium sulphate in cutting and grinding applications	Chemical product category (PC): PC 0: Other: UCN S35000 Environmental release category (ERC): ERC 11b: Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing) Subsequent service life relevant for that use?: no
35	Uses of downstream users/ consumers (IUs of DUs); all the USES reported in IU 20 of industrial uses in SU3 above	Chemical product category (PC): PC 0: Other: all the PCs reported in IU 20 of industrial uses in SU3 above Environmental release category (ERC): ERC 0: Other: other, all the ERCs reported in IU 20 of industrial uses in SU3 above Subsequent service life relevant for that use?: no



Product information according to SDS format of (EC) No. 453/2010

Printing date: 10.12.2010

Revision date: 10.12.2010/ replaces Version of 06.12.2010

Abbreviations:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the

International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations

Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOEC: No observed effect concentration

LOAEL: Lowest observed adverse effect level

NOAEL: No observed adverse effect level

Literature data and data sources

REACH registration dossier, company data

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
